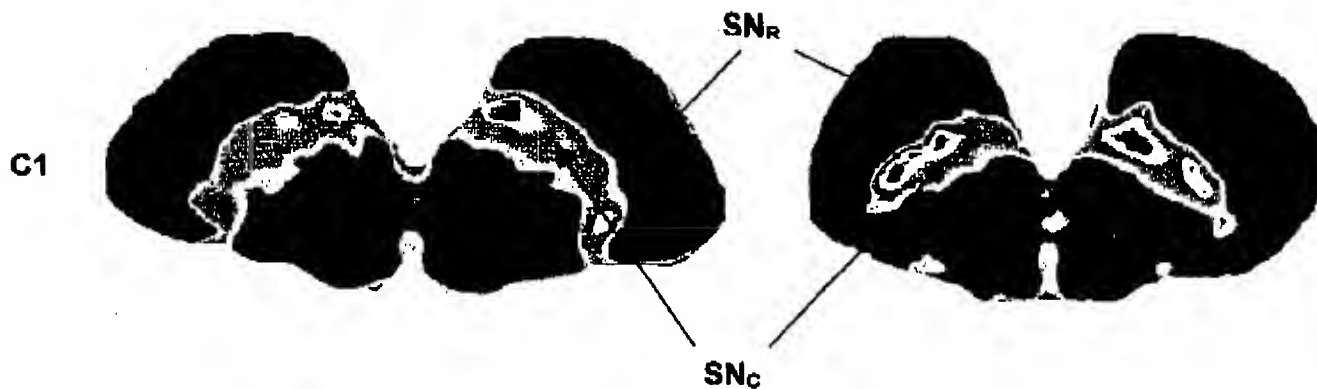


Upper Slice Normal

Lower Slice Normal



Upper Slice Early Stage PD

Lower Slice Early Stage PD



Upper Slice Late Stage PD

Lower Slice Late Stage PD

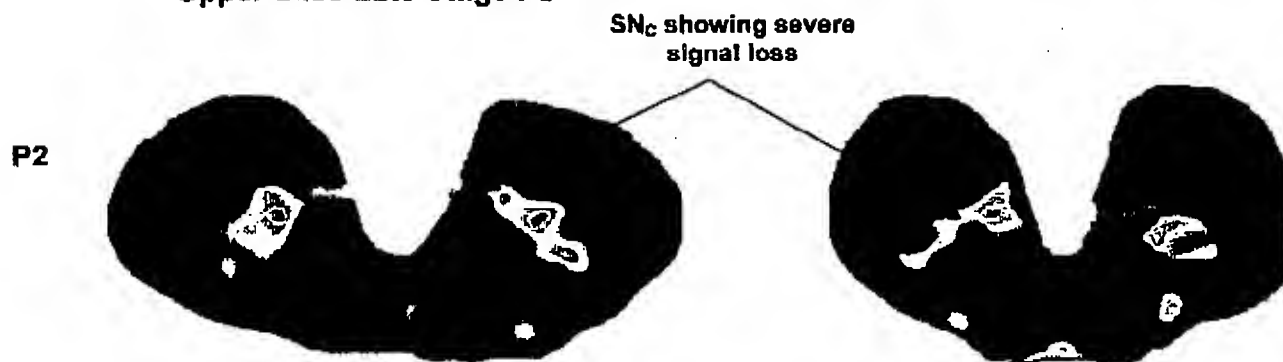
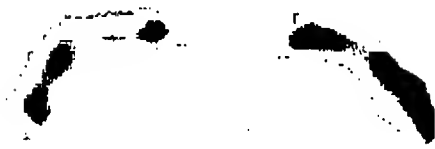
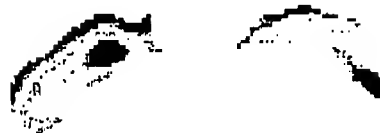


FIG. 1

**SN<sub>c</sub> Upper Slice  
Control subject**



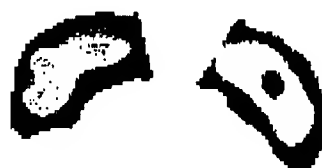
**SN<sub>c</sub> Lower Slice  
Control subject**



**SN<sub>c</sub> Upper Slice  
PD Patient 1**



**SN<sub>c</sub> Lower Slice  
PD Patient 1**



**SN<sub>c</sub> Upper Slice  
PD Patient 2**



**SN<sub>c</sub> Lower Slice  
PD Patient 2**



**Ratio images of the substantia nigra pars compacta (SN<sub>c</sub>) after automated segmentation of the WMS images of the cerebral peduncle.**

## Progressive Supranuclear Palsy (PSP)



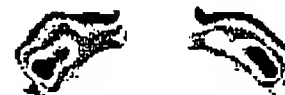
Upper (WMS / GMS)  
Ratio Image



Segmented SN<sub>c</sub>  
(Upper Slice)



Lower (WMS / GMS)  
Ratio Image



Segmented SN<sub>c</sub>  
(Lower Slice)

Imaging of the substantia nigra pars compacta (SN<sub>c</sub>) in Progressive Supranuclear Palsy (PSP). The left column shows the (WMS / GMS) ratio images of upper and lower slices and the right hand side displays the SN<sub>c</sub> segmented from the WMS images of the cerebral peduncle. Images are displayed using the pseudo color lookup table on the right. Note that the gradient of signal is in the opposite direction to that seen in Parkinson's disease (i.e. there is relative loss of signal medially). This suggests the possibility of distinguishing the two forms of parkinsonism radiographically.

FIG. 3

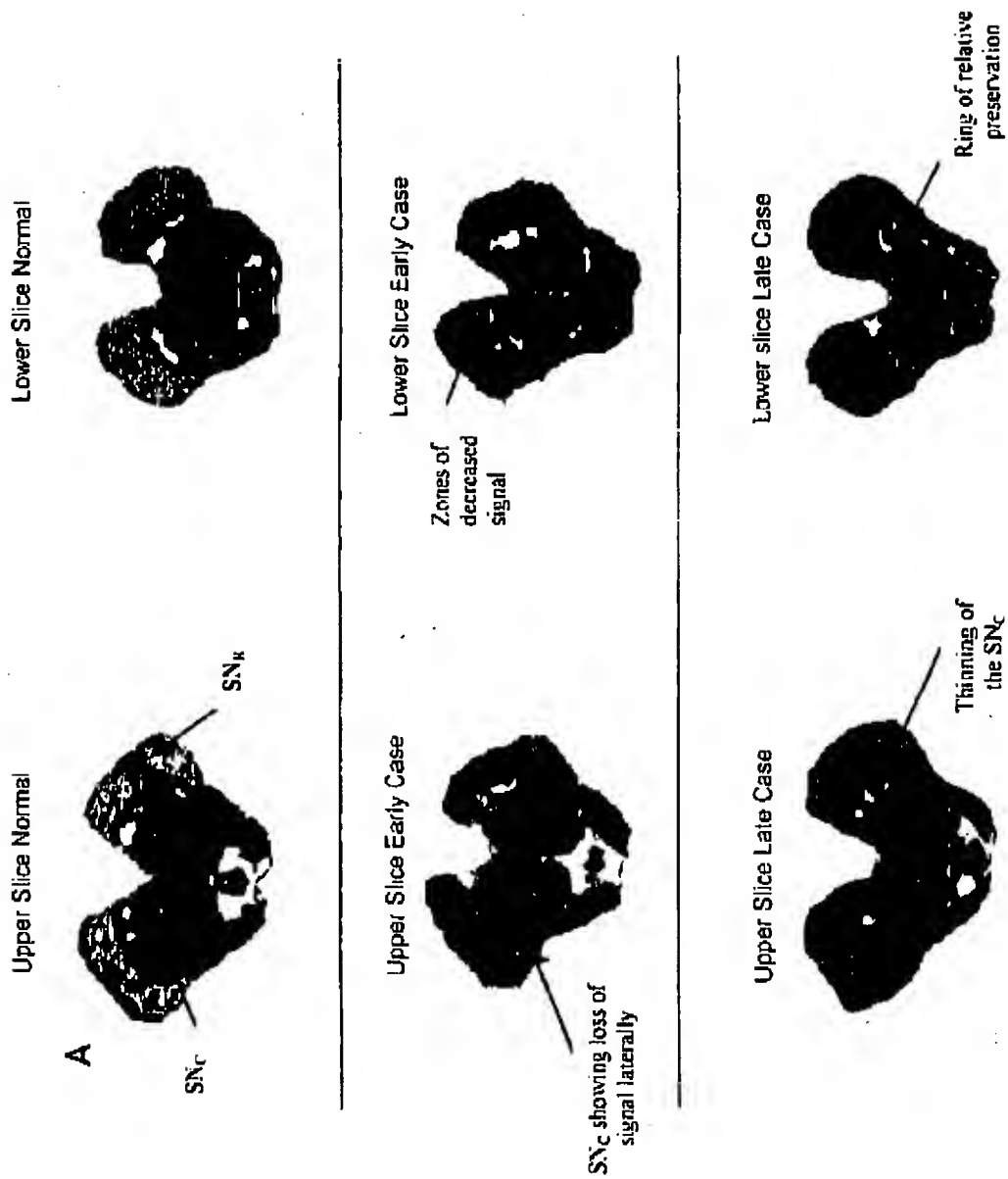


Fig. 4

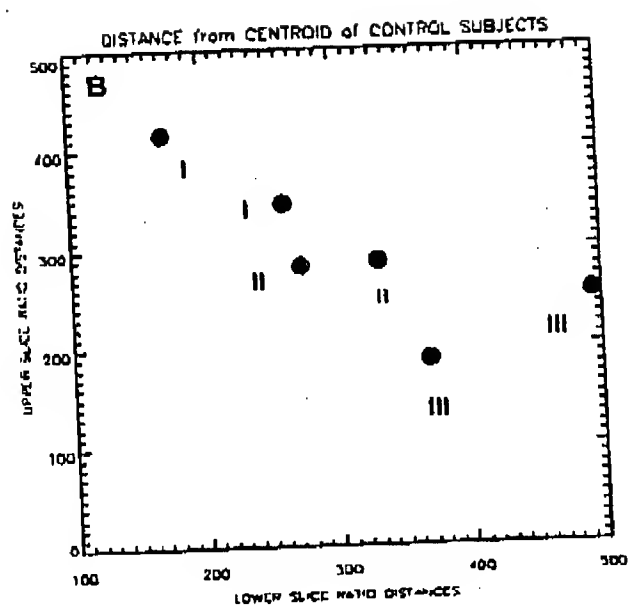


Fig. 5

AJNR: 21, April 2000

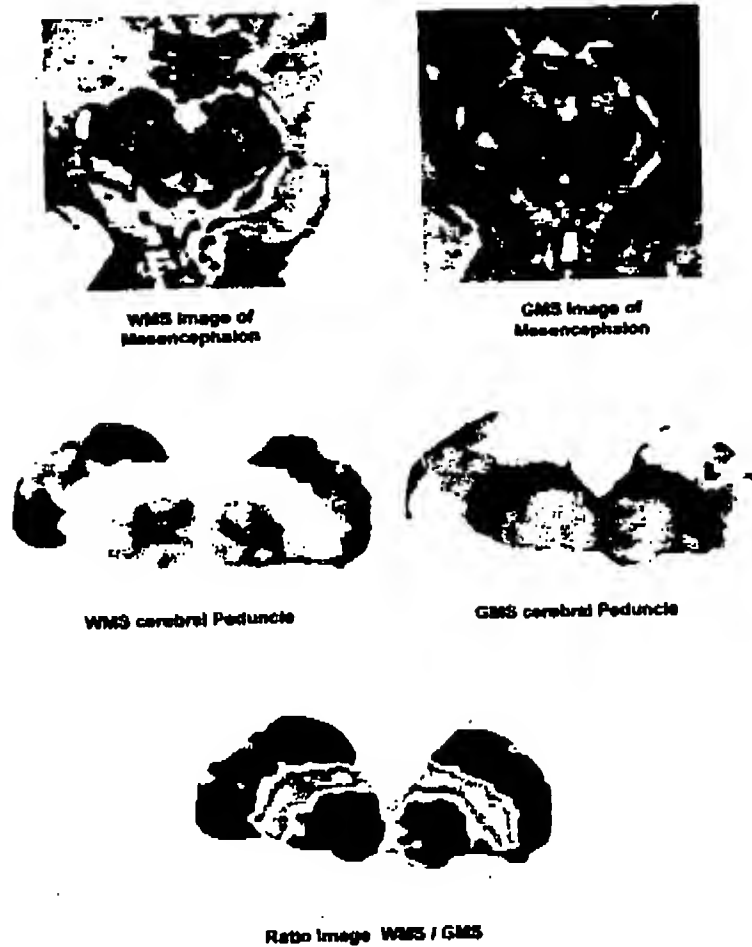


Fig. 6

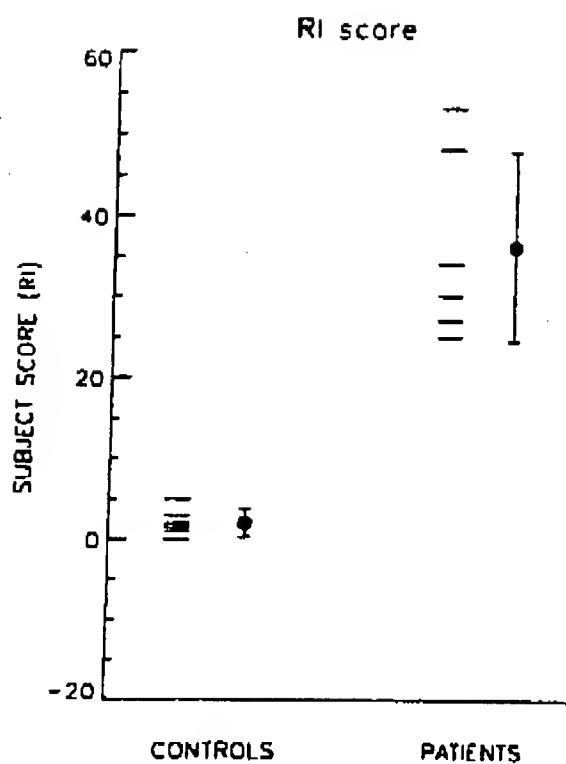


Fig. 7

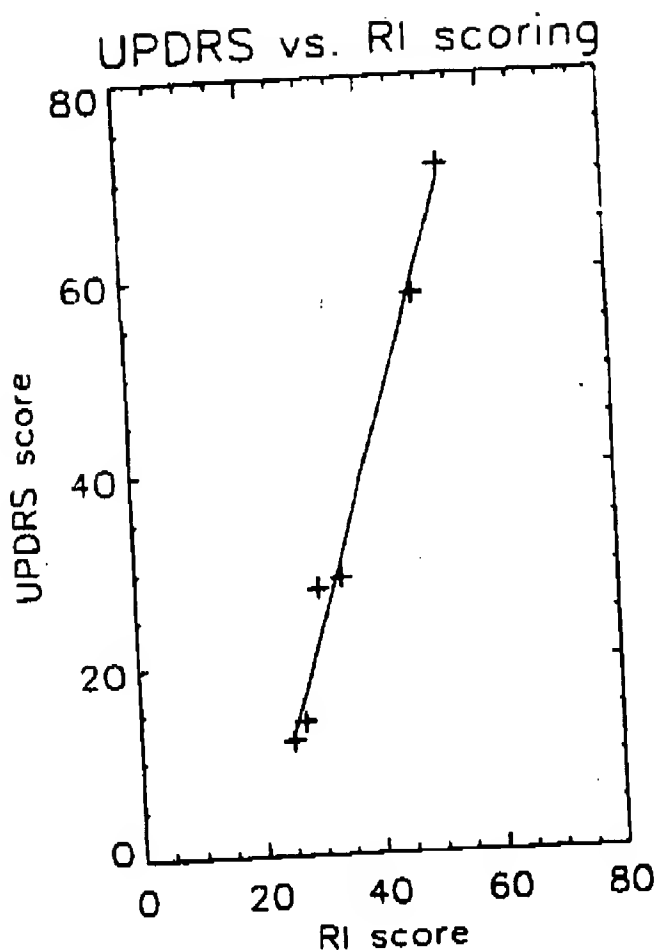


Fig. 8